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Note

Notes on the Systematics and Natural History of *Dielocerus fasciatus* (Enderlein) and key to species of the genus (Hymenoptera: Argidae)

Dielocerus fasciatus (Enderlein) (new combination) was recently collected from a central Amazonian inundation forest near Manaus, Brazil. Up to now, this species has been represented by only two females from Ecuador and Peru. Notes are here given on its systematic position and natural history. The taxonomic work was done by D. R. Smith, the field and laboratory work by J. Adis. Specimens are deposited in the Institute Nacional de Pesquisas da Amazônia (INPA), Manaus, Brazil, and the National Museum of Natural History, Washington, D.C.

Systematics.—*Dielocerus fasciatus* was described by Enderlein (1919, Sber. Gesell. Naturf. Freunde Berlin, p. 117) as *Eriglenum fasciatum* from "Eucador, Cuvaray." Though Malaise (1941. Ent. Tidskr. 62: 133) placed it in his genus *Digelasinus,* its correct placement was doubtful until DRS examined the type in 1977 through the courtesy of E. Kierych. Polish Academy of Sciences, Institute of Zoology, Warsaw. Other than the type and material obtained from the rearing reported here, DRS has seen only one other specimen, that being from Pucallpa, Peru, X-2-1954, E. I. Schlinger and E. S. Ross, collectors (in the California Academy of Sciences, San Francisco). This rearing has provided associated males for the first time.

Dielocerus is a small genus, now with three species. Both sexes of *fasciatus* are very similar in structure to *formosus* and *diasi* (see illustrations of ovipositors and male genitalia in Smith. 1975. Proc. Ent. Soc. Wash. 77: 369–375), differing only by subtle differences in the shape of the genitalia of those species. The easiest way to separate *fasciatus* is by color as used in the following key to species. Larvae of all three are known to spin mass cocoons that are attached to the trunks of trees and shrubs, similar to that described by Dias (1976. Studia Entomol. 19: 461–501) for *diasi.* All distribution records given in the key are from specimens DRS has examined.

Key to Species of *Dielocerus*

1. Female 2
– Male 4
2. Mesonotum black, rest of thorax orange; hindtibia and hindtarsus black; less than 10 mm long (costa black, intercostal area infuscated black; apical wing margin even, without apical notch)(Brazil: Amazonas; Ecuador; Peru) (on *Sclerolobium paniculatum*) ..... *fasciatus* (Enderlein)
– Thorax orange; hindtibia and/or hindtarsus with orange; 12–15 mm long 3
3. Costa black; intercostal area usually black infuscated; apical wing margin even, without notch; apical 4 hindtarsal segments usually black (Brazil: Minas Gerais, Rio de Janeiro, Espirito Santo, Bahia) (on *Inga* sp.) .... *formosus* (Klug)

- Costa white; intercostal area hyaline; notch on antero-apical margin of forewing near apex of radial cell (Fig. 1, Smith, 1975) (Brazil: Distrito Federal, Goias, Mato Grosso) (on *Sclerolobium aureum*) ..... *diasi* Smith

4. Head orange; mesoprescutum orange, rest of mesonotum black; costa whitish ..... *diasi* Smith
- Head black above antennae; mesonotum black; costa black 5
5. Apical 4 hindtarsal segments black; orange on hind orbits restricted to lower ⅓; large, 12–13 mm long ..... *formosus* (Klug)
- Hindtarsus orange; orange on hind orbits extends nearly to top of eye; small, less than 9 mm long ..... *fasciatus* (Enderlein)

Natural history.—Central Amazonian inundation forests along black-water rivers, e.g., the Rio Negro, are annually inundated for 5–6 months (March/April to August/September), up to several meters in height. Six cocoons containing prepupae of *D. fasciatus* were collected in July 1979 during the receding water phase in one of these forests at Tarumã Mirím near Manaus (cf. Adis. 1981. Amazoniana 7(2): 87–173). They were found on tree trunks of *Sclerolobium paniculatum* (Leguminoseae, Caesalpinae) at about 2.5 m height. The cocoons had previously been flooded for 4–6 weeks, evident by the high-water mark on the trunks and by the brownish coating, which the receding waters left on the cocoons. Adults emerged in the laboratory in January and August 1981 as well as in January 1982. This is more than two years after cocoon formation. *Dielocerus fasciatus* apparently passes a diapause in the prepupal stage as already reported for *D. diasi*, a sawfly of the cerrado near Brasilia (Dias, 1976). The cells and silk web of the cocoon are impermeable to water, thus insensitive to flooding. Flood resistance is already known to occur in terricolous arthropods of black-water inundation forests, especially in small species, e.g., Acari (*Rostrocoetes foveolatus* Sellnick, Oribatidae; Beck. 1972. Pedobiologia 12: 133–148), Symphyla (*Ribautiella amazonica* Scheller, Scoloendrellidae; Scheller and Adis. *In press.* Amazoniana), and Diplopoda (Pyrogdesmidae; Adis, unpublished data), as well as in Coleoptera larvae (*Sisenopiras gounellei* Pic, Oedemeridae) found in decaying wood under water (Arnett and Adis, unpublished data).

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